UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,788	05/11/2001	Thomas Baumann	033275-214	5192

21839 7590 10/17/2003

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER	
ROSSI, JESSICA	

ART UNIT	PAPER NUMBER
1733	14

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/852,788	BAUMANN ET AL.	
	Examiner	Art Unit	
	Jessica L. Rossi	1733	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/2/03, Amendment D, paper no. 13* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *16 and 17* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 18-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *11* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment dated 9/2/03. Claims 23-24 were added. Claims 1-24 are pending.

2. The rejection of claims 1-3, 5-6, 12-15, 18, and 21 under 35 U.S.C. 103(a) as being unpatentable over Philofsky (of record) in view of the Admitted Prior Art in the specification of the present application and Nicolai (of record), as set forth in paragraph 11 of the previous office action, has been withdrawn in light of Applicants arguments dated 9/2/03 pertaining to the examiner's interpretation of the Admitted Prior Art (see p. 12-14 of arguments).

Election/Restrictions

3. Applicant's election with traverse of Group I, claims 1-15 and 18-22, in Paper No. 13 is acknowledged. The traversal is on the ground(s) that searching Groups I and II together would not place serious burden on the examiner. This is not found persuasive because, as set forth in the previous office action, the shrink sleeve could be applied to a variety of products, such as a package or container, thereby placing serious burden on the examiner (see US 6129938; of record).

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 5, 13-14, 18, 21, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky (US 3497737; of record) in view of the collective teachings of Anderson (US

5793130) and the prior art referred to by Krackeler (US 4585607; of record), and also in view of the collective teachings of Beninger (US 3910011), Barnett (US 4116116), and Cassell (US 4155970).

With respect to claim 1, Philofsky, directed to producing an insulated stator winding 16 for a rotating electrical machine (column 1, line 27; column 2, lines 9-10), teaches applying an electrically insulating sheath 19 having a rectangular cross-section (Figure 2; column 3, lines 7-8) to a periphery of a rectangular conductor bar comprising a plurality of rectangular conductors 17 (Figure 2; column 2, lines 67-68). The reference is silent as to how the sheath is applied to the conductor bar – specifically, the sheath being shrunk onto the conductor bars.

It is known in the art to apply a heat shrinkable sleeve to a stator winding (column 3, lines 33-35 and 55-58), just as it is known to use a heat shrinkable sleeve as insulation for electrical conductors (column 1, lines 10-11), as taught by the collective teachings of Anderson and the prior art referred to by Krackeler, respectively.

One reading the Philofsky reference as a whole would have appreciated that a method for applying the insulating sheath to the conductor bar of the stator winding is not critical to the invention and therefore it would have been obvious to the skilled artisan at the time the invention was made to apply the sheath as a heat shrinkable sleeve because such is known in the art, as taught by the collective teachings of Anderson and the prior art referred to by Krackeler, and this application technique is fast and efficient.

Since the conductor bar of Philofsky has a rectangular cross-section, it would have been obvious to the skilled artisan to apply the sheath as a heat shrinkable sleeve having a rectangular cross-section because heat shrinkable sleeves having a rectangular cross-section are known in a

variety of arts, as taught by the collective teachings of Beninger (Figure 6; column 1, lines 45-48), Barnett (column 1, lines 63-64), and Cassell (Figure 1; column 3, lines 40-42), wherein using a heat-shrinkable sleeve having the same cross-section as the article to which it is being applied would result in a tight fit between the same.

Regarding claim 5, the collective teachings of Anderson (column 3, lines 55-58) and the prior art referred to by Krackeler (column 1, lines 10-11 and 19) teach the sleeve being heat shrinkable.

Regarding claim 13, Philofsky teaches the conductor bar comprising individual conductors 17 (Figure 2).

Regarding claim 14, Philofsky is silent as to temporarily connecting the individual conductors. It would have been obvious to one of ordinary skill in the art at the time the invention was made to temporarily connect the conductors because this would prevent them from moving around during shrinking of the sleeve.

Regarding claim 18, Philofsky is silent as to the dynamoelectric machine being a direct or alternating current machine. However, the skilled artisan would have readily appreciated that dynamoelectric machines can be either direct or alternating current machines.

Regarding claim 21, Philofsky teaches the conductors having a rectangular cross-section (Figure 2).

Regarding claim 23, the collective teachings of Beninger, Barnett, and Cassell teach the sleeve having a rectangular internal cross-section (see above with respect to claim 1).

6. Claims 2-3, 6, 12, 15, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky, the collective teachings of Anderson and the prior art referred to by Krackeler,

and also the collective teachings of Beninger, Barnett, and Cassell as applied to claim 1 above, and further in view of the Admitted Prior Art in the specification of the present application.

Regarding claims 2 and 24, Philofsky is silent as to mechanically dilating the shrink-on sleeve in its cold state and applying the sleeve around an outer periphery of a support sleeve before the support sleeve is pulled over the conductor bar. It appears that Applicants teach it is known in the art to mechanically dilate a shrink-on sleeve in its cold state and apply the shrink on sleeve around an outer periphery of a support sleeve before the support sleeve is pulled over the conductor bar (p. 3-4, [0009]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the sleeve to the conductor bar of Philofsky in the manner claimed by Applicants because such is know in the art, as taught by the Admitted Prior Art, and one reading the Philofsky reference as a whole would have appreciated that no criticality is placed on how the sheath is applied to the conductor bar where only the expected results would have been achieved.

Regarding claim 3, Philofsky is silent as to removing the support sleeve. It appears Applicants teach it is known in the art to remove the support sleeve from between the shrink-on sleeve and the conductor bar after the support sleeve surrounded by the shrink-on sleeve has been applied to the conductor bar (p. 3, [0009]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the support sleeve as suggested by Applicants because such is known in the art, as taught by the Admitted Prior Art, where only the expected results of allowing the sleeve to shrink onto the conductor bar would have been achieved.

Regarding claim 6, Philofsky is silent as to dilating the sleeve with compressed air and pulling the sleeve sheath in a cold state over the conductor bar. Selection of a particular method for dilating the sleeve would have been within purview of the skilled artisan at the time the invention was made absent any unexpected results. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to pull the sleeve in a cold state over the conductor bar because it appears that Applicants teach that such is known in the art (p. 3 [0009]) as discussed above in reference to present claim 2.

Regarding claim 12, Philofsky is silent as to the conductor bar and shrunk sleeve being bent with a bending device into a shape suitable for a stator. It would have been obvious to one of ordinary skill in the art at the time the invention was made to bend the conductor bar having the sleeve thereon into a suitable stator configuration because it appears Applicants teach such being known in the art (p. 4, [0010]), wherein such bending is necessary to produce the desired shaped stator.

Regarding claim 15, Philofsky is silent as to the conductors not being Roebel-transposed in the area of an involute. It appears Applicants teach it is known in the art to use conductors in a Roebel-transposed arrangement of a non-Roebel-transposed arrangement (p. 2, [0005]). Selection of either arrangement would have been within purview of the skilled artisan at the time the invention was made absent any unexpected results.

7. Claims 4 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky, the collective teachings of Anderson and the prior art referred to by Krackeler, the collective teachings of Beninger, Barnett, and Cassell, and the Admitted Prior Art as applied to

claim 2 above, and further in view of the collective teachings of Evans (US 4135553) and Forman et al. (US 5624618).

Regarding claim 4, the Admitted Prior Art is silent as to melting the support. It is known in the art to remove a polymer support from a shrinkable sleeve by dissolving the support in a solvent, as taught by Evans (column 3, lines 59-61). It is also known to remove a polymer support from the material it is supporting by melting the support as an alternative to dissolving it in a solvent, as taught by Forman et al. (column 3, lines 17-18). Therefore, it would have been obvious to the skilled artisan at the time the invention was made to remove the support from the shrinkable sleeve of Philofsky by melting the support because such is known, as taught by the collective teachings of Evans and Forman, and this allows for easy removal of the same.

Regarding claim 20, Evans and Forman teach the support being polymeric. Selection of a polymeric support having particular characteristics would have been within purview of the skilled artisan at the time the invention was made.

8. Claims 7-9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky, the collective teachings of Anderson and the prior art referred to by Krackeler, and also the collective teachings of Beninger, Barnett, and Cassell as applied to claim 1 above, and further in view of Mohebban et al. (US 4589939; of record).

Regarding claims 7 and 9, Philofsky is silent as to the sleeve being made of a plurality of radially superimposed layers each having different properties. It would have been obvious to one of ordinary skill in the art to use a sleeve having a plurality of radially superimposed layers with different properties because such is known in the art, as taught by Mohebban (column 2, lines 61-65), where this allows for manipulation of the properties of the sleeve.

Regarding claim 8, Philofsky is silent as to how the sleeve is made. It would have been obvious to one of ordinary skill in the art at the time the invention was made to co-extrude the sleeve because such is known in the art, as taught by Mohebban (column 2, lines 55-56), and this allows for continuous production of the sleeve.

Regarding claim 22, Mohebban teaches one of the layers being the main insulation (column 6, lines 62-65).

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky, the collective teachings of Anderson and the prior art referred to by Krackeler, and also the collective teachings of Beninger, Barnett, and Cassell as applied to claim 1 above, and further in view of Dienes (US 3946480; of record).

Regarding claim 10, Philofsky is silent as to providing adhesive between the sleeve and conductor bar. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply adhesive to the inside of the sleeve or the outside of the conductor bar because such is known in the art, as taught by Dienes (column 5, line 64 – column 6, line 1), where this would ensure a good bond between the same. Selection of a particular adhesive would have been within purview of the skilled artisan depending on the desired characteristics.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky, the collective teachings of Anderson and the prior art referred to by Krackeler, and also the collective teachings of Beninger, Barnett, and Cassell as applied to claim 1 above, and further in view of Vallauri et al. (US 5985062; of record).

Regarding claim 11, Philofsky is silent as to the sleeve being an extruded elastomer. Selection of a particular material for the sheath would have been within purview of the skilled

artisan at the time the invention was made depending on the desired characteristics thereof. However, it is known in the art to make insulation sleeves from extruded elastomeric material, as taught by Vallauri (column 3, lines 20-21 and 47-51).

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Philofsky, the collective teachings of Anderson and the prior art referred to by Krackeler, the collective teachings of Beninger, Barnett, and Cassell, and also in view of the Admitted Prior Art as applied to claim 3 above, and further in view of Krackeler.

Regarding claim 19, the Admitted Prior Art (p. 4, [0009]) and Krackeler (Figure 5; column 2, lines 20-22) teach the support being removed along helically arranged perforations.

Response to Arguments

12. Applicant's arguments filed 9/2/03 have been fully considered but they are not persuasive.

13. On page 12 of the arguments, Applicants argue that the skilled artisan would have understood that the insulation sheath 19 of Philofsky consists of several layers of glass-mica tape bonded by a brittle, inelastic thermoset material wherein the rectangular shape is produced by having the insulation on the conductor in a mold during impregnation and curing.

The examiner points out that Philofsky is completely silent as to the material comprising the insulation sheath 19 and how it is applied to the conductor bar; therefore, Applicants conclusions are mere speculation.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **703-305-5419**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard D. Crispino can be reached on 703-308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jessica L. Rossi
Patent Examiner
Art Unit 1733

jlr

JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300